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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,202

04/14/2005

Steffen Hasenzahl

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SMITH, GAMBRELL & RUSSELL  
SUITE 3100, PROMENADE II  
1230 PEACHTREE STREET, N.E.  
ATLANTA, GA 30309-3592

EXAMINER

GODENSCHWAGER, PETER F

ART UNIT

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1796

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



<b>Office Action Summary</b>	<b>Application No.</b> 10/532,202	<b>Applicant(s)</b> HASENZAHN ET AL.	
	<b>Examiner</b> PETER F. GODENSCHWAGER	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6 and 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |



### **DETAILED ACTION**

Applicant's reply filed February 4, 2008 has been fully considered. Claims 1, 2, 4, 6, and 8 are amended, claims 13 and 14 are new, claims 3, 5, and 7 are cancelled, and claims 1, 2, 4, 6, and 8-14 are pending.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US Pat. No. 5,959,005) in view of Menon et al. (US Pat. No. 6,159,540).

Hartmann et al. teaches a powder (pulverulent material) that may contain a silanized silica (surface modified metallic oxide) where the silica is pyrogenically prepared (1:14-15, 40-45, and 55-56). Hartman et al. further teaches a silanized silica with the following properties, a specific surface area according to BET of 80-400 m<sup>2</sup>/g, a primary (average) particle size of 7-40 nm, a pH value of 3-10, a carbon content of 0.1-15%, and a DBP number of <200% (1:15-25).

Hartmann et al. does not teach the composition where the surface modifying groups are dimethylsilyl or monomethylsilyl. However, Menon et al. teaches the use of dimethyldichlorosilane (DMDCS) and methyltrichlorosilane (MTCS) for functionalizing silica (3:25-35 and 3:54-4:7) which would give dimethylsilane and monomethylsilane functional groups on the silica. Hartmann et al. and Menon et al. are combinable because they are



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concerned with the same field of endeavor, namely silanized silica. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the DMDCS and MTCS as taught by Menon et al. with the composition taught by Hartmann et al. and would have been motivated to do so because Menon et al. teaches that the polyfunctional silanes are economical and that the using recovered MTCS from waste streams is environmentally beneficial (4:1-7).

Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US Pat. No. 5,959,005) in view of Menon et al. (US Pat. No. 6,159,540).

Hartmann et al. teaches a powder (pulverulent material) that may contain a silanized silica (surface modified metallic oxide) where the silica is pyrogenically prepared. Hartman et al. further teaches a silanized silica with the following properties, a specific surface area according to BET of 80-400 m<sup>2</sup>/g, a primary (average) particle size of 7-40 nm, a pH value of 3-10, a carbon content of 0.1-15%, and a DBP number of <200% (1:15-25). Hartmann et al. additionally teaches using (combining) the silanized silica with a fire-extinguishing agent (1:14-15, 40-45, and 55-56).

Hartmann et al. does not teach the composition where the surface modifying groups are dimethylsilyl or monomethylsilyl. However, Menon et al. teaches the use of dimethyldichlorosilane (DMDCS) and methyltrichlorosilane (MTCS) for functionalizing silica (3:25-35 and 3:54-4:7) which would give dimethylsilane and monomethylsilane functional groups on the silica. Hartmann et al. and Menon et al. are combinable because they are concerned with the same field of endeavor, namely silanized silica. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the DMDCS and MTCS



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as taught by Menon et al. with the composition taught by Hartmann et al. and would have been motivated to do so because Menon et al. teaches that the polyfunctional silanes are economical and that the using recovered MTCS from waste streams is environmentally beneficial (4:1-7).

Claims 4, 6, 8, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US Pat. No. 5,959,005) in view of Menon et al. (US Pat. No. 6,159,540).

Regarding Claims 4, 6, 8, and 9: Hartmann et al. teaches a powder (pulverulent material) that may contain a silanized silica (surface modified metallic oxide) where the silica is pyrogenically prepared (1:14-15, 40-45, and 55-56). Hartman et al. further teach the silanized silica with the following properties, a specific surface area according to BET of 80-400 m<sup>2</sup>/g, a primary (average) particle size of 7-40 nm, a pH value of 3-10, a carbon content of 0.1-15%, and a DBP number of <200% (1:15-25).

Hartmann et al. does not teach the composition where the surface modifying groups are dimethylsilyl or monomethylsilyl. However, Menon et al. teaches the use of dimethyldichlorosilane (DMDCS) and methyltrichlorosilane (MTCS) for functionalizing silica (3:25-35 and 3:54-4:7) which would give dimethylsilane and monomethylsilane functional groups on the silica. Hartmann et al. and Menon et al. are combinable because they are concerned with the same field of endeavor, namely silanized silica. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the DMDCS and MTCS as taught by Menon et al. with the composition taught by Hartmann et al. and would have been motivated to do so because Menon et al. teaches that the polyfunctional silanes are economical and that the using recovered MTCS from waste streams is environmentally beneficial (4:1-7).



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Regarding Claims 11 and 12: Hartmann et al. further teaches where the powder (pulverulent material) is a fire-extinguishing powder (1:55-56).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US Pat. No. 5,959,005) in view of Menon et al. (US Pat. No. 6,159,540) as applied to claim 4 above, and further in view of Koehlert et al. (US Pat. No. 5,928,723).

Hartmann et al. in view of Menon et al. render the composition of claim 4 obvious as set forth above.

Hartmann et al. does not the teach the composition where the pulverulent material is selected from the group of instant claim 10. However, Koehlert et al. teaches that surface modified metal oxides and organo-metal oxides may be combined with powders such as herbicides and insecticides (agricultural chemicals) (1:47-61). Hartmann et al. and Koehlert et al. are combinable because they are concerned with the same field of endeavor, namely surface modified metal oxides. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the herbicide and insecticide powders taught by Koehlert et al. with the modified silicas of Hartmann et al. and would be motivated to do so because Koehlert et al. teaches that surface modified metal oxides and organo-metal oxides act as free flow agents for the powders (1:55-60).

### ***Response to Arguments***

Applicant's arguments filed February 4, 2008 have been fully considered but they are not persuasive.



In response to applicant's argument that Menon (US Pat. No. 6,159,540) does not teach that the silicas of Hartmann (US Pat. No. 5,959,005) would be improved. Menon states economic and environmental considerations as a clear motivation for using dimethyldichlorosilane (DMDCS) and methyltrichlorosilane (MTCS) for functionalizing silica. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that Koehlert (US Pat. No. 5,928,723) does not suggest that powdery materials defined in claim 10 could be improved, Koehlert suggests that powdery materials such as herbicides and insecticides can be combined with metal-oxide free flow agents to prevent caking (1:55-61).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37



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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER F. GODENSCHWAGER whose telephone number is (571)270-3302. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/  
Supervisory Patent Examiner, Art Unit 1796  
17-Mar-08

PFG  
March 4, 2008